

REMARKS

Applicants have reviewed the final Office Action mailed on October 23, 2002, from the United States Patent and Trademark Office in the above-identified application. Claim 2 has been amended. Claims 2-10 remain pending in the application and are submitted for reconsideration by the Examiner. No new matter has been entered. Entry of this reply is respectfully requested to place this application in condition for allowance, or at least in better form for appeal.

Claims 2, 5, and 8-10 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,181,569 to Chakravorty. Claims 3, 4, 6, and 7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chakravorty. These rejections are respectfully traversed in view of the above amendments and for at least the reasons set forth below. Accordingly, Applicants request reconsideration of the pending claims 2-10.

Independent claim 2 was rejected under 35 U.S.C. § 102(e) as being anticipated by Chakravorty. Applicants respectfully traverse this rejection, because Chakravorty does not teach every element of independent claim 2. As amended, claim 2 recites a combination of features including, among other things, a second metal pattern including an upper surface, a first side portion, a second side portion, and a third side portion intermediate the first side portion and the second side portion, the first side portion and the third side portion defining a space therebetween, and the second side portion and the third side portion defining a space therebetween, and an external terminal electrically connected to the upper surface of the second metal pattern and the side portions of the second metal pattern and extending into the space defined by the first and third side portions and extending into the space defined by the second and third side portions. Support for these combination of features can be found in Applicants'

specification as originally filed at page 6, lines 14-17, page 8, lines 8-13, and page 9, line 19 through page 10, line 3, and in Applicants' Figures 3I, 3J, 4J and 4K.

In contrast to the claimed invention as a whole, Chakravorty shows in Figure 8b symmetrically-shaped UBM layers 310. Chakravorty in col. 9 at lines 46-49 describes the UBM layers 310 as "cups" that are symmetrical and that provide only a single space for receiving the metal bumps 311. As such, Chakravorty does not teach at least an irregularly-shaped second metal pattern as required by claim 2. Furthermore, Chakravorty does not teach at least an external terminal electrically connected to both the upper surface of the second metal pattern and the side portions of the second metal pattern and extending into the plurality of spaces defined by the side portions as required by claim 2. Thus, Chakravorty does not teach every element of claim 2. Accordingly, claim 2 is patentable over Chakravorty.

Accordingly, independent claim 2 is in a condition for allowance. As claims 5, 9, and 10 depend ultimately from claim 2, claims 5, 9, and 10 are also patentable over Chakravorty for at least this reason, and the rejection to claims 5, 9, and 10 should also be withdrawn. Each of remaining claims 3, 4, 6, and 7 depend ultimately from independent claim 2. In rejecting claims 3, 4, 6, and 7 under 35 U.S.C. § 103(a), the Office Action relies on Chakravorty for alleged disclosure of each of the elements recited in claim 2 and incorporated in claims 3, 4, 6, and 7. Thus, claims 3, 4, 6, and 7 are allowable for at least that reason. Applicants therefore respectfully request that the rejection to claims 3, 4, 6, and 7 under 35 U.S.C. § 103(a) be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully request entry of this reply and the timely allowance of pending claims 2-10.

Applicants respectfully invite the Examiner to contact the undersigned by telephone if any outstanding issues remain unresolved.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned, "**VERSION WITH MARKINGS TO SHOW CHANGES MADE.**"

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Claim 2 has been amended as follows:

2. (Twice Amended) A semiconductor package, comprising:

a semiconductor substrate;

a plurality of chip pads separately formed on an upper surface of the semiconductor substrate;

a first metal pattern formed on upper surfaces of the plurality of chip pads;

a second metal pattern including an upper surface ~~[and side portions]~~, **a first side portion, a second side portion, and a third side portion intermediate the first side portion and the second side portion, the first side portion and the third side portion defining a space therebetween, and the second side portion and the third side portion defining a space therebetween,** the second metal pattern having an irregular shape and formed on an upper surface of the first metal pattern; and

an external terminal electrically connected to the upper surface of the second metal pattern and the side portions of the second metal pattern **and extending into the space defined by the first and third side portions and extending into the space defined by the second and third side portions.**